CLAIMS

It is claimed:

1. An AM receiving circuit comprising:

an intermediate frequency amplifying unit that generates an intermediate frequency signal from a broadcast wave signal received by an antenna to amplify and output the intermediate frequency signal;

an AGC (Automatic Gain Control) unit that sets gain of the intermediate frequency amplifying unit depending on electric field intensity of the broadcast wave signal; and

an AM detecting unit that detects the intermediate frequency signal output from the intermediate frequency amplifying unit, wherein the AM receiving circuit comprises

a sound quality compensating unit including:

a filter unit that extracts a predetermined frequency band of the audio signal;

an amplifying unit that boosts or attenuates the audio signal in the predetermined frequency band extracted from the filter unit; and

a controlling unit that controls filter characteristics of the filter unit and sets a boosting function or an attenuating function of the amplifying unit, depending on the electric field intensity of the broadcast wave signal.

2. The AM receiving circuit of claim 1, wherein

the filter unit consists of a low-pass filter that attenuates a high frequency band component of the audio signal and a high-pass filter that attenuates a low frequency band component of the audio signal output from the low-pass filter.

3. The AM receiving circuit of claim 2, wherein

the low-pass filter has filter characteristics that attenuate a higher frequency band component of the audio signal with weakening the electric field intensity in a predetermined electric field intensity range of the broadcast wave signal, and wherein

the high-pass filter has filter characteristics that attenuate a lower frequency band component of the audio signal output from the low-pass filter with weakening the electric field intensity in a predetermined electric field intensity range of the broadcast wave signal.

4. The AM receiving circuit of any one of claims 1, 2, and 3, wherein

the controlling unit controls the filter characteristics of the filter unit and sets the boosting function or the attenuating function of the amplifying unit, depending on a signal-meter signal output from the AGC circuit.

5. The AM receiving circuit of any one of claims 1, 2, and 3, comprising:

an intermediate frequency filter that extracts a carrier frequency component of the intermediate frequency signal output from the intermediate frequency amplifying unit; and

an integrator that integrates output of the intermediate frequency filter, wherein

the controlling unit controls the filter characteristics of the filter unit and sets the boosting function or the attenuating function of the amplifying unit, depending on the integration output of the integrator, if the electric field intensity of the broadcast wave signal is lower than a predetermined value, and wherein

the controlling unit controls the filter characteristics of the filter unit and sets the boosting function or the attenuating function of the amplifying unit, depending on the signal-meter signal output from the AGC circuit, if the electric field intensity of the broadcast wave signal is higher than a predetermined value.